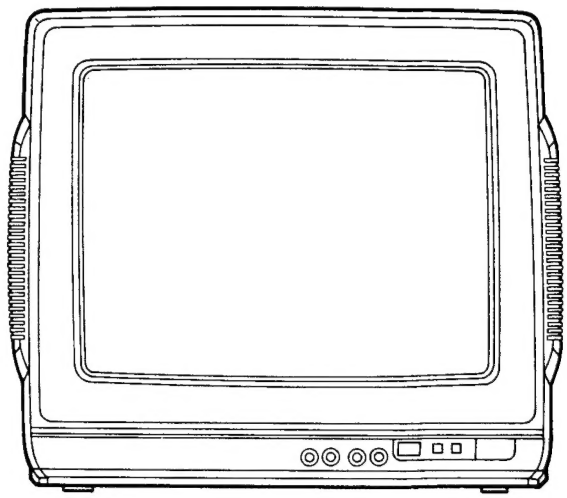
SERVICE DATA
FILE NO. 050-351
4- SYSTEM

TOSHIBA

COLOUR TELEVISION
1400RST



SPECIFICATIONS

Power Input Rating:	55 watts (normal), AC 220 volts, 50 Hz
Aerial Input Impedance:	75 ohm unbalanced type for UHF
Receiving Channels:	PAL B/G Standard, SECAM B/G Standard: VHF ..... channels 2 to 4, 5 to 12 and S3 to S20 UHF ..... channels 21 to 69 PAL D/K, SECAM D/K Standard: VHF ..... channels 1 to 12 UHF ..... channels 21 to 69
Intermediate Frequencies:	Picture I-F carrier frequency ..... 38.9 MHz Sound I-F carrier frequency: B/G ..... 33.4 MHz D/K ..... 32.4 MHz
Picture Tube:	14 inches, A34EAC00X10 (34 cm measured on diagonal of viewable picture area)
Sound Output:	1 watt (at 10% harmonic distortion)
Speakers:	77 mm, round
Cabinet:	Plastic portable type
Dimensions:	Height ..... 337 mm Width ..... 391 mm Depth ..... 382 mm
Weight:	8.9 kg

Specifications are subject to change without notice.

Printed in Japan Oct. 1990 (So)

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 24.5 kV at zero beam current (minimum brightness) operating at 240V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 26.0 kV. When checking the E.H.T., use the 'High Voltage Check' procedure in this manual using an accurate E.H.T. voltmeter.
2. The only source of X-RAY radiation in this receiver is the C.R.T. To prevent X-ray radiation, the replacement C.R.T. must be identical to the original fitted as specified in the Parts List.
3. Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation.
   For continued safety, replacement component should only be made after referring the Product Safety Notice below.

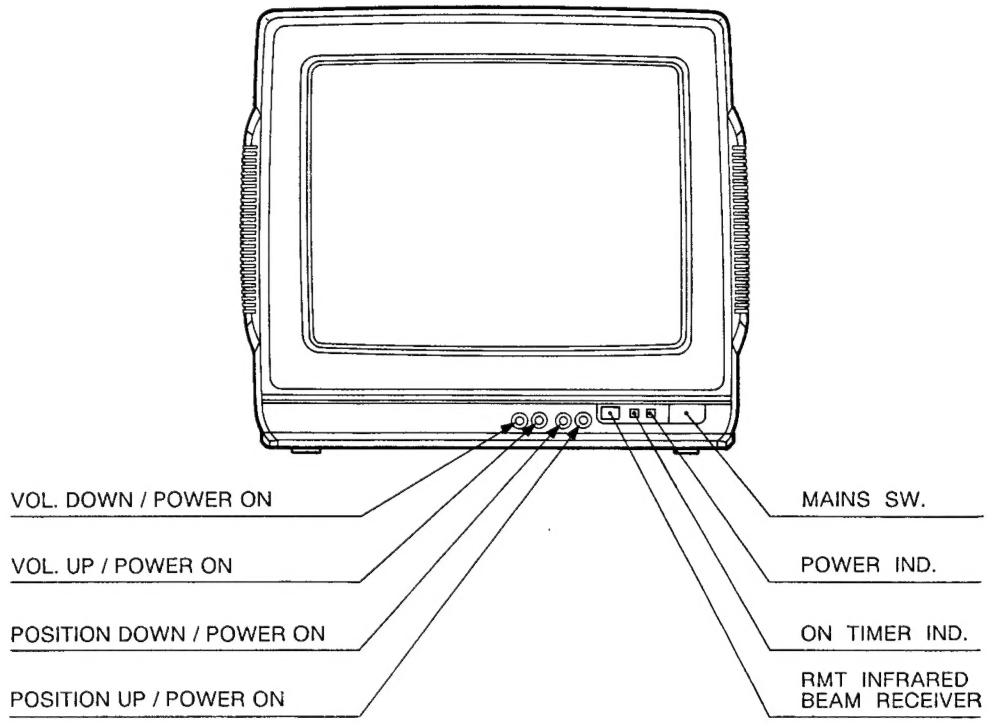
SAFETY PRECAUTION

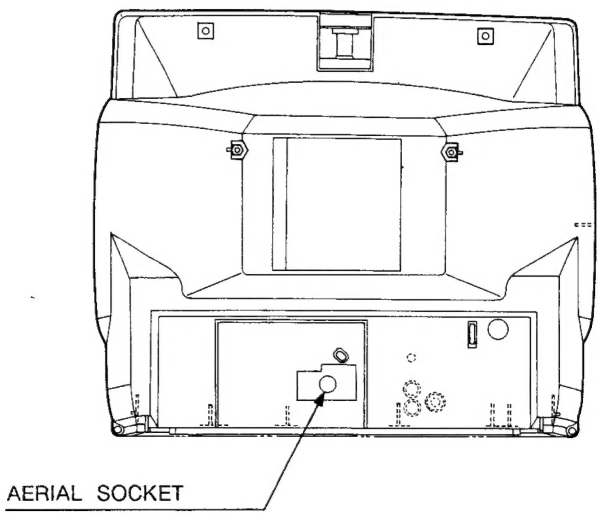
1. This receiver has a nominal working E.H.T. voltage of 23 kV. Extreme caution should be exercised when working on the receiver with the back removed.
   Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment.
   When handling or working on the C.R.T., always discharge the anode to the receiver chassis before removing the anode cap
   The C.R.T., if broken, will violently expel glass fragments. Use shatter proof goggles and take extreme care while handling.
   Do not hold the C.R.T. by the neck as this is a very dangerous practice.
2. It is essential that to maintain the safety of the customer all cable forms be replaced exactly as supplied from factory.
3. A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
4. Replace blown fuses within the receiver with the fuse specified in the parts list.
5. When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
6. Keep wires away from high temperature components.

PRODUCT SAFETY NOTICE

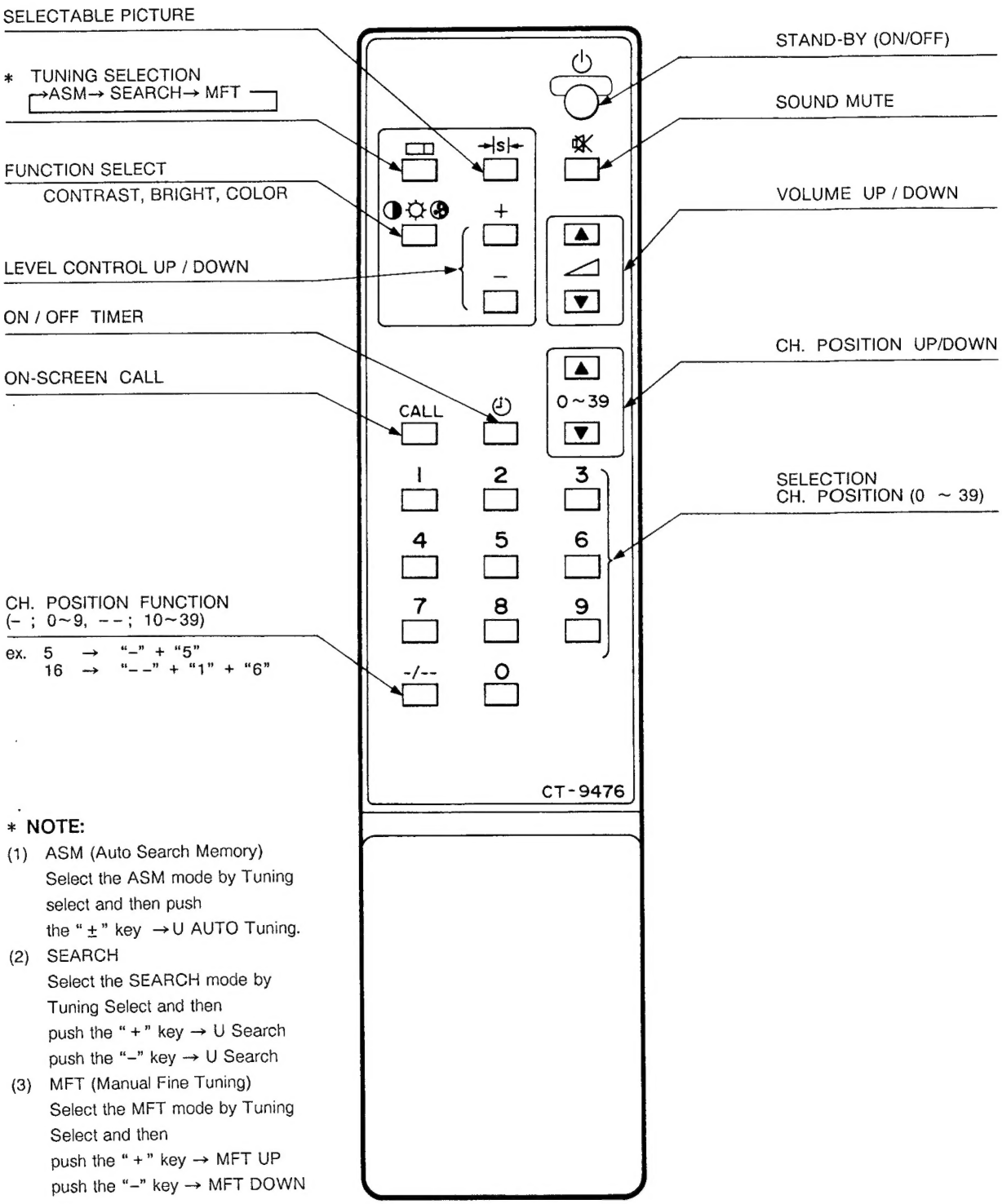
Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded by them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc.
Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

FRONT CONTROLS AND REAR VIEWS





REMOTE HAND HELD UNIT



*** NOTE:**

(1) ASM (Auto Search Memory)
Select the ASM mode by Tuning select and then push the "±" key →U AUTO Tuning.

(2) SEARCH
Select the SEARCH mode by Tuning Select and then
push the "+" key → U Search
push the "–" key → U Search

(3) MFT (Manual Fine Tuning)
Select the MFT mode by Tuning Select and then
push the "+" key → MFT UP
push the "–" key → MFT DOWN

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUSTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL INFORMATION

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials. Plug the power cord into a convenient 240 volts 50Hz AC power outlet.

Turn the receiver ON and adjust the FINE TUNING for best picture detail with the AFC turned OFF.

Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least one hour in order that the automatic degaussing circuit operates properly.

Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures, as mentioned later.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 26.0kV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 26.0kV under any conditions.

HEIGHT ADJUSTMENT

HEIGHT Control (R351) on MAIN Board changes the size of the picture or pattern, having an equal effect on the top and bottom. Make final adjustment to overscan the mask 2 cm at top and bottom.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS.(T461) for well defined scanning lines in the centre area on the screen.

RF AGC ADJUSTMENT

1. Tune the set in the strongest station in your area.
2. Turn RF AGC Control (R151) on Main Board to fully counterclockwise position.
3. Adjust RF AGC Control clockwise until noise (snow) just disappears on the screen.

PAL MATRIX ADJUSTMENT

1. Tune in the colour programme PAL Philips pattern.
2. Set the COLOUR Control VR. to obtain the proper colour.
3. If the PAL MATRIX adjustment is in correct, the Venetian Blind would appear in the colour bars area. This case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind.
5. Next adjust 1H-DL ADJ. VR (R551) to minimize the Blind.
6. Remove the capacitor, and if the Venetian Blind still remains, adjust 1H-DL PHASE ADJ. Coil (L551) to minimize the Blind again.
7. Repeat the item 5 and 6 procedures, adjust the R551 and L551 until the Blind does not appear when the capacitor is connected.

SOUND DET (L651) ADJUSTMENT

1. Connect pin 11 of P601 to ground.
2. Supply +12V to cathode of D408.
3. Connect the SIF generator to base of Q602 through 0.01 μF capacitor.
4. Connect the oscilloscope to pin 9 of Q101.
5. Set up the SIF generator as described below.

Sound carrier frequency	:	5.5 MHz
Modulation frequency	:	1000 Hz
Frequency deviation	:	±15 kHz
Signal level	:	80 dBμ (50 ohm load)

6. Adjust L651 for the maximum response of 1000 Hz det-out on scope.

BELL COIL (LM01) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the terminal pin 2 of LM01.
3. Adjust LM01 for the flat level of amplitude in each colour bar waveform on the scope. (See figure 1.)

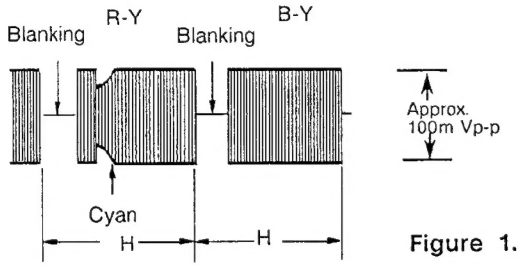


Figure 1.

IDENT COIL (LM04) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 23 of IC501.
3. Adjust LM04 for the maximum indication (approx. DC10V) on the meter.

B-Y, R-Y DEMOD COIL (LM02, LM03) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Set the COLOUR, BRIGHTNESS and CONTRAST Controls free.
3. Connect the synchroscope to the pin 62 of IC501.
4. Adjust LM02 so that the white level in picture part reaches to the vertical retrace line. (See figure 2.)
5. Then change the connection of synchroscope from the pin 62 to the pin 60 of IC501.
6. Adjust LM03 so that the white level in picture part reaches to the vertical retrace line. (See figure 3.)

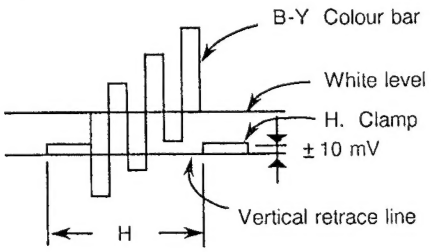


Figure 2.

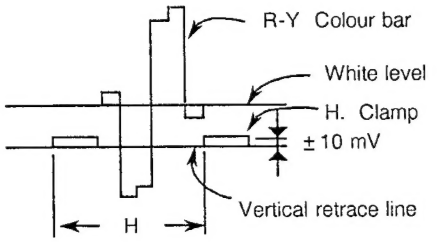


Figure 3.

PAL MATRIX ADJUSTMENT

1. Tune in the colour programme of the Philips pattern.
2. Set the COLOUR Control to obtain the proper colour.
3. If the PAL MATRIX adjustment is incorrect, the Venetian Blind would appear in the colour bars area. This case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind.
5. Next adjust 1H-DL ADJ. VR (R551) to minimize the Blind.
6. If the Venetian Blind still remains, adjust 1H-DL PHASE ADJ. Coil (L551) to minimize the Blind again.
7. Repeat the item 5 and 6 procedures, adjust the R551 and L551 until the Blind does not appear.

CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Set the CONTRAST, BRIGHTNESS, COLOUR Controls to minimum.
3. Set the SERVICE SW. (S201) in the "H. LINE" position.
4. Turn the SCREEN Control (on T461) fully counter-clockwise.
5. By rotating the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) clockwise from the minimum, set them to the mid position.
6. Rotate the SCREEN Control gradually clockwise until the first horizontal line of a colour (RED, GREEN or BLUE) appears slightly on the screen. Set the SCREEN Control to this position.
   At the base of the colour, rotate the remaining two CUT OFF Controls gradually clockwise until the horizontal lines of each colour appear slightly on the screen.
   The line may look like white if the CUT OFF Controls are adjusted properly.
7. Set the SERVICE SW. (S201) in the "RECEIVE" position.
8. Rotate the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls to obtain a good white balance in both low and high light areas.

SUB-BRIGHTNESS ADJUSTMENT

1. Tune in a colour programme.
2. Set the CONTRAST Control to the minimum and the BRIGHTNESS Control to the centre.
3. Set the COLOUR Control to the centre.
4. Set the SUB-BRIGHT. Control (R255) to the centre and leave the receiver for five minutes in this state.
5. Watching the picture well, adjust the SUB-BRIGHT. Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
6. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
7. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the controls turned to the maximum, adjust the SUB-BRIGHT. Control again for the acceptable picture.

PICTURE I-F ALIGNMENT

GENERAL ..... Refer to figure 1 for test equipment connection.
PRELIMINARY STEPS ..... 1. Disconnect the solder link on the foil of tuner IF OUT.
2. Supply +12 volts to the Main Board. (Cathode of D408).
3. Supply +5 to +6 volts to pin 1 of IC101.
IF SIGNAL GENERATOR ..... Connect to the point (d) as shown figure 1.
Set to 38.9 MHz with signal level of 70 to 80 dBμ.
DIGITAL VOLTMETER ..... Connect to pin 18 of IC101.

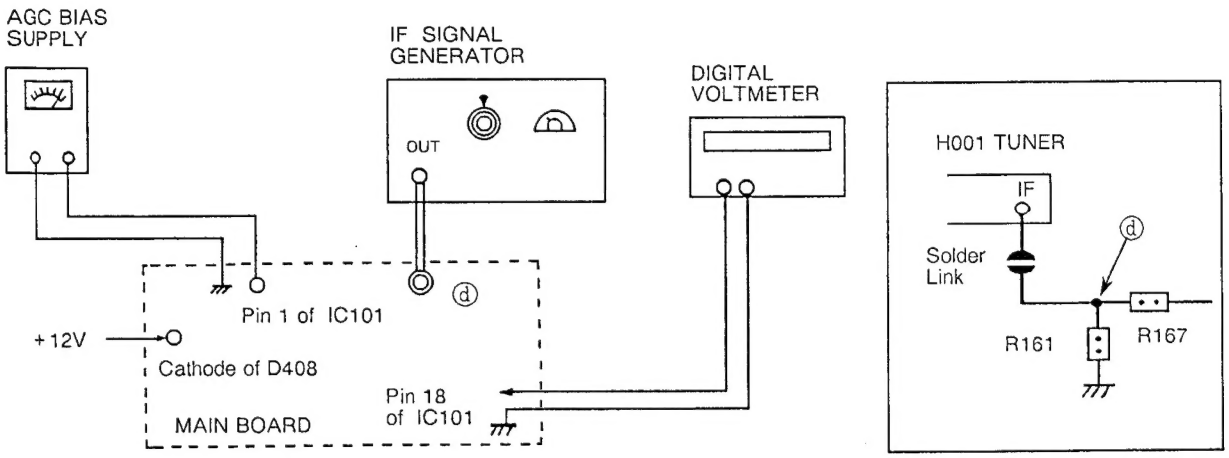


Figure 1. Picture IF Alignment

STEP	IF SIGNAL GENERATOR	ADJUST	REMARKS
VIDEO DET.	38.9 MHz 70 to 80 dBμ	L151	• Adjust L151 for the minimum voltage on the meter.
After completing the above steps, disconnect the equipment and re-solder the liniks on the Main Board, and adjust the AGC Delay control (R151) following DELAYED RF AGC ADJUSTMENTS.			

AFC ALIGNMENT

GENERAL ..... Refer to figure 3 for test equipment connection.
PRELIMINARY STEPS ..... 1. Supply +12 volts to the Main Board. (Cathode of D408)
2. Turn AGC DELAY Control (R151) on the Main Board fully clockwise.
DIGITAL VOLTMETER ..... Connect to the resistor R171 ((e) in figure 3) and ground.

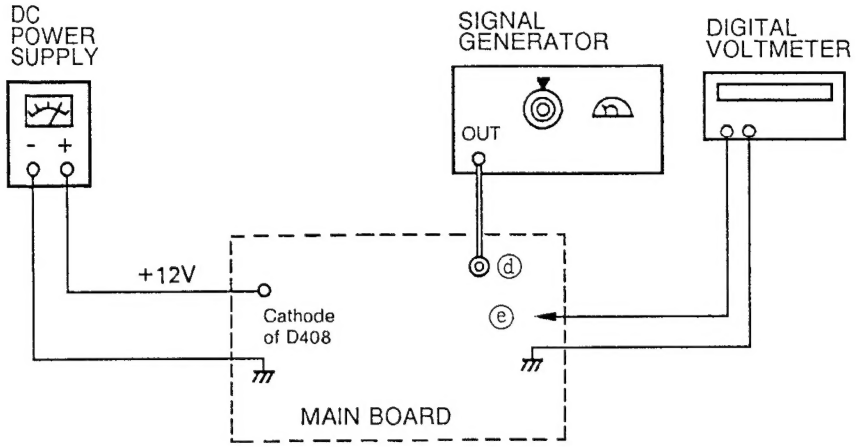


Figure 2. AFC Alignment

STEP	SIGNAL GENERATOR	ADJUST	REMARKS
1. AFC Balance (R152)	NO SIGNAL	R152	• Short the pin 1 of IC101 to ground. • Adjust R152 for 4.5 volts at the point (e) in figure 3.
2. AFC DET. (L152)	38.9 MHz CARRIER WAVE (Level : 70 to 80 dBμ)	L152	• Remove the short of pin 1 of IC101. • Connect IF carrier wave to the point (d) in figure 3. • Adjust L152 for 2.5 volts on the meter at the point (e).

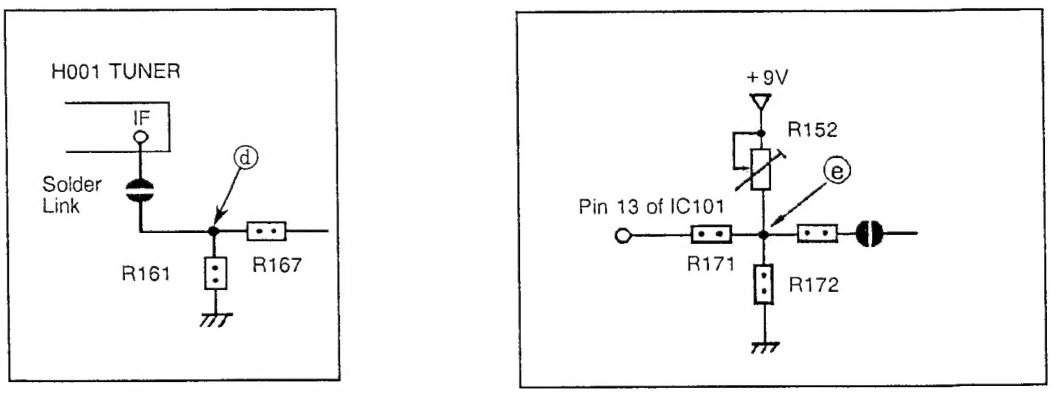
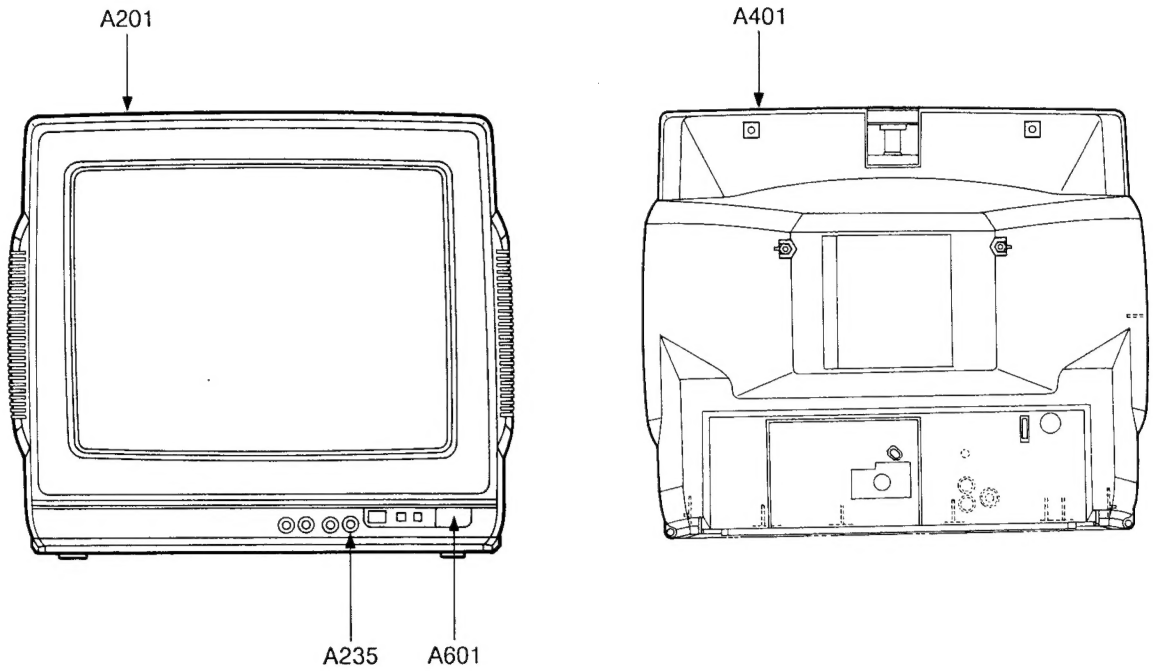


Figure 3.

CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201	23418618	Front Cover
A235	23443462	Knob, UP-DOWN
A401	23423706	Back Cover
A411	23567247	Label, Model No., B/C
A601	23443463	Knob, POWER
A701	23523683	Carton Box
A702	23934121	Packing, Bottom
A703	23934120	Packing, Top
A710	23567244	Label, Model No., Carton
Y101	23994956	Owner's Manual
Y103	23561021	Owner's Manual, French
Y104	23561022	Owner's Manual, German
Y105	23561023	Owner's Manual, Czechoslovak
Y106	23561024	Owner's Manual, Polish
Y125	23124935	Aerial, VHF Telescopic
Y145	23293977	Adapter, Aerial Matching, AD809E

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The international hazard symbols in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE: The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

ABBREVIATIONS:

Capacitors..... CD : Ceramic Disk PF : Plastic Film EL : Electrolytic
Resistors..... CF : Carbon Film CC : Carbon Composition MF : Metal Film
OMF : Oxide Metal Film VR : Variable Resistor FR : Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Part No.	Description
CAPACITORS		
C101	24212102	CD, 1000pF, ±10%
C102	24232103	CD, 0.01μF, +80%, −20%
C103	24232103	CD, 0.01μF, +80%, −20%
C104	24206228	EL, 0.22μF, 50V
C105	24232103	CD, 0.01μF, +80%, −20%
C107	24212102	CD, 1000pF, ±10%
C108	24085031	EL, 1μF, ±20%, 25V, Non-Polar
C109	24633101	EL, 100μF, 16V
C111	24633470	EL, 47μF, 16V
C112	24232103	CD, 0.01μF, +80%, −20%
C162	24232103	CD, 0.01μF, +80%, −20%
C163	24212102	CD, 1000pF, ±10%
C164	24212102	CD, 1000pF, ±10%
C165	24212102	CD, 1000pF, ±10%
C167	24212102	CD, 1000pF, ±10%
C171	24436220	CD, 22pF
C172	24212102	CD, 1000pF, ±10%
C201	24636100	EL, 10μF, 50V
C202	24795101	EL, 100μF, 25V
C203	24232103	CD, 0.01μF, +80%, −20%
C204	24797220	EL, 22μF, ±20%, 50V
C205	24636478	EL, 0.47μF, 50V
C208	24212102	CD, 1000pF, ±10%
C209	24232103	CD, 0.01μF, +80%, −20%
C210	24636100	EL, 10μF, 50V
C211	24212561	CD, 560pF, ±10%
C212	24636010	EL, 1μF, 50V
C213	24590104	PF, 0.1μF
C240	24636478	EL, 0.47μF, 50V
C301	24636229	EL, 2.2μF, 50V
C302	24212152	CD, 1500pF, ±10%
C303	24617912	EL, 2.2μF, ±10%, 50V
C307	24232103	CD, 0.01μF, +80%, −20%
C311	24796102	EL, 1000μF, 35V
C312	24214472	CD, 4700pF, ±10%, 500V
C314	24435510	CD, 51pF, 500V
C315	24082053	PF, 0.1μF, 100V
C316	24794472	EL, 4700μF, 16V
C317	24617912	EL, 2.2μF, ±10%, 50V

Location No.	Part No.	Description
C323	24212332	CD, 3300pF, ±10%
C325	24796101	EL, 100μF, 35V
C328	24590272	PF, 2700pF
C402	24353271	CD, 270pF
C403	24636339	EL, 3.3μF, 50V
C405	24590183	PF, 0.018μF
C406	24590183	PF, 0.018μF
C407	24591243	PF, 0.024μF
C408	24636100	EL, 10μF, 50V
C409	24232103	CD, 0.01μF, +80%, −20%
C411	24590222	PF, 2200pF
C416	24214271	CD, 270pF, ±10%, 500V
⚠ C440	24095636	PF, 7200pF, ±3%, 1600V
C442	24095947	PF, 0.39μF, 200V
C445	24833223	PF, 0.022μF, ±10%, 200V
C446	24640908	EL, 33μF, ±20%, 160V
C447	24644100	EL, 10μF, 250V
C448	24794102	EL, 1000μF, 16V
⚠ C463	24212222	CD, 2200pF, ±10%
C501	24797220	EL, 22μF, ±20%, 50V
C503	24436181	CD, 180pF
C504	24436181	CD, 180pF
C505	24590273	PF, 0.027μF
C506	24590103	PF, 0.01μF
C507	24590103	PF, 0.01μF
C508	24085028	EL, 2.2μF, 25V, Non-Polar
C509	24353330	CD, 33pF
C510	24232103	CD, 0.01μF, +80%, −20%
C511	24232103	CD, 0.01μF, +80%, −20%
C512	24353200	CD, 20pF
C515	24636220	EL, 22μF, 50V
C516	24590104	PF, 0.1μF
C517	24590104	PF, 0.1μF
C518	24232103	CD, 0.01μF, +80%, −20%
C519	24232103	CD, 0.01μF, +80%, −20%
C520	24636478	EL, 0.47μF, 50V
C521	24636478	EL, 0.47μF, 50V
C522	24636478	EL, 0.47μF, 50V
C523	24636478	EL, 0.47μF, 50V
C524	24232103	CD, 0.01μF, +80%, −20%
C528	24590104	PF, 0.1μF

Location No.	Part No.	Description
C530	24796220	EL, 22μF, ±20%, 35V
C531	24436181	CD, 180pF
C532	24436151	CD, 150pF
C533	24436161	CD, 160pF
C534	24794221	EL, 220μF, 16V
C536	24636478	EL, 0.47μF, 50V
C545	24436820	CD, 82pF
C546	24436820	CD, 82pF
C547	24436820	CD, 82pF
C561	24436360	CD, 36pF
C562	24436360	CD, 36pF
C570	24212102	CD, 1000pF, ±10%
C601	24436470	CD, 47pF
C602	24436470	CD, 47pF
C603	24232103	CD, 0.01μF, +80%, −20%
C604	24212272	CD, 2700pF, ±10%
C605	24232103	CD, 0.01μF, +80%, −20%
C606	24353510	CD, 51pF
C607	24232103	CD, 0.01μF, +80%, −20%
C608	24353120	CD, 12pF
C609	24232103	CD, 0.01μF, +80%, −20%
C610	24232103	CD, 0.01μF, +80%, −20%
C611	24232103	CD, 0.01μF, +80%, −20%
C612	24232103	CD, 0.01μF, +80%, −20%
C630	24636010	EL, 1μF, 50V
C651	24093928	Variable Capacitor, 5.2 to 30pF, 100V
C660	24795221	EL, 220μF, ±20%, 25V
C661	24590104	PF, 0.1μF
C662	24636010	EL, 1μF, 50V
C663	24636479	EL, 4.7μF, 50V
C665	24590104	PF, 0.1μF
C666	24590392	PF, 3900pF
C685	24636479	EL, 4.7μF, 50V
C699	24794470	EL, 47μF, ±20%, 16V
⚠ C801	24098999	PF, 0.1μF, ±20%, AC250V
C802	24098999	PF, 0.1μF, ±20%, AC250V
C803	24092281	CD, 4700pF, ±20%, AC250V
C804	24092281	CD, 4700pF, ±20%, AC250V
C805	24092281	CD, 4700pF, ±20%, AC250V
C806	24092281	CD, 4700pF, ±20%, AC250V
C810	24086937	EL, 120μF, ±20%, 450V
C811	24550224	PF, 0.22μF, 63V
C812	24636100	EL, 10μF, 50V
C813	24797470	EL, 47μF, ±20%, 50V
C814	24092345	CD, 1000pF, ±10%, 2kV
C817	24214102	CD, 1000pF, ±10%, 500V
C902	24095914	PF, 2200pF, ±3%, 1600V
CA01	24436101	CD, 100pF
CA02	24232103	CD, 0.01μF, +80%, −20%
CA03	24436101	CD, 100pF
CA04	24436101	CD, 100pF
CA05	24436101	CD, 100pF
CA06	24436101	CD, 100pF
CA07	24212102	CD, 1000pF, ±10%
CA08	24232103	CD, 0.01μF, +80%, −20%
CA09	24794470	EL, 47μF, ±20%, 16V
CA10	24232103	CD, 0.01μF, +80%, −20%
CA11	24590472	PF, 4700pF
CA12	24212561	CD, 560pF, ±10%
CA13	24633100	EL, 10μF, 16V
CA14	24794470	EL, 47μF, ±20%, 16V
CA15	24232103	CD, 0.01μF, +80%, −20%
CA16	24232103	CD, 0.01μF, +80%, −20%

Location No.	Part No.	Description
CA17	24590103	PF, 0.01μF
CA18	24232103	CD, 0.01μF, +80%, −20%
CA19	24232103	CD, 0.01μF, +80%, −20%
CA20	24636010	EL, 1μF, 50V
CA21	24212391	CD, 390pF, ±10%
CA22	24212221	CD, 220pF, ±10%
CA23	24590104	PF, 0.1μF
CA24	24590104	PF, 0.1μF
CA25	24636229	EL, 2.2μF, 50V
CA26	24232103	CD, 0.01μF, +80%, −20%
CA28	24590104	PF, 0.1μF
CA30	24636479	EL, 4.7μF, 50V
CA31	24232103	CD, 0.01μF, +80%, −20%
CA32	24794221	EL, 220μF, 16V
CA35	24636010	EL, 1μF, 50V
CA36	24590104	PF, 0.1μF
CA40	24232103	CD, 0.01μF, +80%, −20%
CA45	24794471	EL, 470μF, ±20%, 16V
CA46	24794470	EL, 47μF, ±20%, 16V
CA47	24636100	EL, 10μF, 50V
CB01	24212101	CD, 100pF, ±10%
CF84	24795471	EL, 470μF, ±20%, 25V
CM01	24436221	CD, 220pF
CM02	24436221	CD, 220pF
CM05	24232103	CD, 0.01μF, +80%, −20%
CM06	24357270	CD, 27pF
CM07	24590563	PF, 0.056μF
CM08	24232103	CD, 0.01μF, +80%, −20%
CM10	24436270	CD, 27pF
CN10	24436101	CD, 100pF
CX02	24636478	EL, 0.47μF, 50V
CX03	24636478	EL, 0.47μF, 50V
CX04	24636478	EL, 0.47μF, 50V

RESISTORS

R101	24366152	CF, 1500 ohm
R103	24366152	CF, 1500 ohm
R104	24366562	CF, 5600 ohm
R105	24366104	CF, 100k ohm
R106	24366562	CF, 5600 ohm
R107	24366562	CF, 5600 ohm
R108	24366222	CF, 2200 ohm
R109	24366332	CF, 3300 ohm
R110	24366103	CF, 10k ohm
R113	24382560	OMF, 56 ohm, 1W
R115	24366101	CF, 100 ohm
R116	24366102	CF, 1k ohm
R117	24366271	CF, 270 ohm
R118	24366471	CF, 470 ohm
R122	24366102	CF, 1k ohm
R125	24366101	CF, 100 ohm
R151	24066953	VR, 5k ohm, 1/10W
R152	24066946	VR, 1M ohm, 1/10W
R161	24366131	CF, 130 ohm
R162	24366102	CF, 1k ohm
R163	24366562	CF, 5600 ohm
R164	24552101	OMF, 100 ohm, 1/2W
R166	24366560	CF, 56 ohm
R167	24366680	CF, 68 ohm
R168	24366562	CF, 5600 ohm
R171	24366102	CF, 1k ohm
R172	24366184	CF, 180k ohm
R205	24366152	CF, 1500 ohm
R208	24366101	CF, 100 ohm

Location No.	Part No.	Description
R209	24366183	CF, 18k ohm
R210	24366203	CF, 20k ohm
R211	24366622	CF, 6200 ohm
R212	24366103	CF, 10k ohm
R213	24366101	CF, 100 ohm
R214	24366182	CF, 1800 ohm
R215	24366152	CF, 1500 ohm
R216	24366333	CF, 33k ohm
R217	24366101	CF, 100 ohm
R218	24366472	CF, 4700 ohm
R219	24366472	CF, 4700 ohm
R220	24366753	CF, 75k ohm
R221	24366564	CF, 560k ohm
R222	24366751	CF, 750 ohm
R223	24366103	CF, 10k ohm
R224	24366104	CF, 100k ohm
R225	24366272	CF, 2700 ohm
R226	24366132	CF, 1300 ohm
R227	24366105	CF, 1M ohm
R228	24366104	CF, 100k ohm
R229	24366333	CF, 33k ohm
R234	24366333	CF, 33k ohm
R238	24366331	CF, 330 ohm
R240	24366114	CF, 110k ohm
R241	24366164	CF, 160k ohm
R255	24066601	VR, 20k ohm, 1/10W
R301	24366301	CF, 300 ohm
R302	24366244	CF, 240k ohm
R303	24366393	CF, 39k ohm
R304	24366102	CF, 1k ohm
R305	24366161	CF, 160 ohm
R306	24366471	CF, 470 ohm
R311	24552391	OMF, 390 ohm, 1/2W
R312	24366223	CF, 22k ohm
R313	24366684	CF, 680k ohm
R317	24982759	MF, 7.5 ohm, 1/2W
R320	24366102	CF, 1k ohm
R323	24322129	OMF, 1.2 ohm, 1W
R325	24366183	CF, 18k ohm
R327	24552122	OMF, 1200 ohm, 1/2W
R329	24552472	OMF, 4700 ohm, 1/2W
R330	24552511	OMF, 510 ohm, 1/2W
R351	24066602	VR, 50k ohm, 1/10W
R361	24383271	OMF, 270 ohm, 2W
R402	24366273	CF, 27k ohm
R403	24366302	CF, 3k ohm
R404	24552432	OMF, 4300 ohm, 1/2W
R405	24366511	CF, 510 ohm
R407	24366121	CF, 120 ohm
R408	24366682	CF, 6800 ohm
R411	24366391	CF, 390 ohm
R414	24366910	CF, 91 ohm
R416	24007566	Cement, 2k ohm, 5W
R417	24553331	OMF, 330 ohm, 1W
R440	24376393	CF, 39k ohm, 1/2W
R441	24376393	CF, 39k ohm, 1/2W
R444	24321109	OMF, 1 ohm, 1/2W
R448	24322339	OMF, 3.3 ohm, 1W
R451	24366182	CF, 1800 ohm
R501	24366561	CF, 560 ohm
R502	24366334	CF, 330k ohm
R503	24366202	CF, 2k ohm
R504	24366391	CF, 390 ohm
R505	24366822	CF, 8200 ohm

Location No.	Part No.	Description
R507	24366822	CF, 8200 ohm
R508	24366561	CF, 560 ohm
R509	24366183	CF, 18k ohm
R510	24366101	CF, 100 ohm
R511	24366562	CF, 5600 ohm
R512	24366152	CF, 1500 ohm
R513	24366152	CF, 1500 ohm
R515	24366221	CF, 220 ohm
R516	24366221	CF, 220 ohm
R517	24366221	CF, 220 ohm
R521	24366562	CF, 5600 ohm
R522	24945185	CC, 1.8M ohm, ±10%, 1/4W
R523	24366102	CF, 1k ohm
R534	24366122	CF, 1200 ohm
R536	24366331	CF, 330 ohm
R537	24366102	CF, 1k ohm
R538	24366391	CF, 390 ohm
R539	24366102	CF, 1k ohm
R541	24366221	CF, 220 ohm
R542	24366221	CF, 220 ohm
R543	24366221	CF, 220 ohm
R544	24366222	CF, 2200 ohm
R545	24366222	CF, 2200 ohm
R546	24366222	CF, 2200 ohm
R547	24366101	CF, 100 ohm
R551	24066955	VR, 1k ohm, 1/10W
R557	24066600	VR, 10k ohm, 1/10W
R558	24066600	VR, 10k ohm, 1/10W
R559	24066600	VR, 10k ohm, 1/10W
R564	24366392	CF, 3900 ohm
R565	24366102	CF, 1k ohm
R591	24382183	OMF, 18k ohm, 1W
R592	24382183	OMF, 18k ohm, 1W
R593	24382183	OMF, 18k ohm, 1W
R601	24366471	CF, 470 ohm
R603	24366563	CF, 56k ohm
R604	24366102	CF, 1k ohm
R605	24366471	CF, 470 ohm
R606	24366471	CF, 470 ohm
R607	24366472	CF, 4700 ohm
R608	24366183	CF, 18k ohm
R609	24366103	CF, 10k ohm
R610	24366124	CF, 120k ohm
R611	24366103	CF, 10k ohm
R612	24366332	CF, 3300 ohm
R613	24366562	CF, 5600 ohm
R614	24366152	CF, 1500 ohm
R615	24366562	CF, 5600 ohm
R616	24366223	CF, 22k ohm
R618	24366101	CF, 100 ohm
R619	24366102	CF, 1k ohm
R620	24366562	CF, 5600 ohm
R621	24366103	CF, 10k ohm
R622	24366103	CF, 10k ohm
R630	24366221	CF, 220 ohm
R660	24366822	CF, 8200 ohm
R661	24366152	CF, 1500 ohm
R662	24366393	CF, 39k ohm
R663	24366339	CF, 3.3 ohm
R690	24366104	CF, 100k ohm
R694	24366103	CF, 10k ohm
R695	24366473	CF, 47k ohm
R696	24366223	CF, 22k ohm
R699	24366103	CF, 10k ohm

Location No.	Part No.	Description
⚠ R801	24007848	Cement, 6.2 ohm, 5W
R811	24376114	CF, 110k ohm, 1/2W
R812	24376114	CF, 110k ohm, 1/2W
R814	24382431	OMF, 430 ohm, 1W
R815	24552131	OMF, 130 ohm, 1/2W
R816	24531100	FR, 10 ohm, 1/2W
R833	24377224	CF, 220k ohm, 1W
R835	24366103	CF, 10k ohm
R836	24366103	CF, 10k ohm
R837	24942223	CC, 22k ohm, 1/2W
R842	24366682	CF, 6800 ohm
R843	24366682	CF, 6800 ohm
R844	24366682	CF, 6800 ohm
R847	24007622	Cement, 5100 ohm, 5W
R890	24000918	PTC Thermistor, 18 ohm, ±20%, 290V
R901	24946272	CC, 2700 ohm, ±10%, 1/2W
R902	24946272	CC, 2700 ohm, ±10%, 1/2W
R903	24946272	CC, 2700 ohm, ±10%, 1/2W
R920	24000890	FR, 1.6 ohm, 1W
RA01	24366101	CF, 100 ohm
RA02	24366102	CF, 1k ohm
RA05	24366102	CF, 1k ohm
RA06	24366102	CF, 1k ohm
RA07	24366102	CF, 1k ohm
RA08	24366102	CF, 1k ohm
RA09	24366103	CF, 10k ohm
RA10	24366102	CF, 1k ohm
RA11	24366102	CF, 1k ohm
RA13	24366472	CF, 4700 ohm
RA14	24366562	CF, 5600 ohm
RA17	24366102	CF, 1k ohm
RA19	24366102	CF, 1k ohm
RA20	24366102	CF, 1k ohm
RA21	24366102	CF, 1k ohm
RA22	24366103	CF, 10k ohm
RA23	24366471	CF, 470 ohm
RA24	24366102	CF, 1k ohm
RA25	24366103	CF, 10k ohm
RA26	24366103	CF, 10k ohm
RA27	24366392	CF, 3900 ohm
RA28	24366103	CF, 10k ohm
RA30	24366471	CF, 470 ohm
RA31	24366102	CF, 1k ohm
RA32	24366103	CF, 10k ohm
RA34	24366103	CF, 10k ohm
RA40	24366473	CF, 47k ohm
RA42	24366473	CF, 47k ohm
RA43	24366153	CF, 15k ohm
RA44	24366102	CF, 1k ohm
RA45	24366223	CF, 22k ohm
RA46	24366333	CF, 33k ohm
RA48	24366333	CF, 33k ohm
RA49	24366333	CF, 33k ohm
RA50	24366333	CF, 33k ohm
RA51	24366333	CF, 33k ohm
RA52	24366333	CF, 33k ohm
RA53	24366103	CF, 10k ohm
RA54	24366103	CF, 10k ohm
RA55	24366391	CF, 390 ohm
RA57	24366273	CF, 27k ohm
RA60	24007404	Cement, 3600 ohm, 10W
RA61	24366225	CF, 2.2M ohm
RA62	24366222	CF, 2200 ohm

Location No.	Part No.	Description
RA63	24366392	CF, 3900 ohm
RA64	24366333	CF, 33k ohm
RA65	24366223	CF, 22k ohm
RA66	24942226	CC, 22M ohm, 1/2W
RA68	24366223	CF, 22k ohm
RA69	24366103	CF, 10k ohm
RA70	24366473	CF, 47k ohm
RA71	24366473	CF, 47k ohm
RA75	24366102	CF, 1k ohm
RA76	24366152	CF, 1500 ohm
RA77	24366102	CF, 1k ohm
RA78	24366103	CF, 10k ohm
RA79	24366391	CF, 390 ohm
RA81	24366103	CF, 10k ohm
RA85	24366153	CF, 15k ohm
RA87	24366102	CF, 1k ohm
RA89	24366103	CF, 10k ohm
RA98	24366333	CF, 33k ohm
RA99	24366224	CF, 220k ohm
RB01	24366333	CF, 33k ohm
RB03	24366103	CF, 10k ohm
RB04	24366103	CF, 10k ohm
RB05	24366332	CF, 3300 ohm
RB06	24366473	CF, 47k ohm
RC01	24366473	CF, 47k ohm
RC02	24366682	CF, 6800 ohm
RC03	24366473	CF, 47k ohm
RC04	24366682	CF, 6800 ohm
RC05	24366473	CF, 47k ohm
RC06	24366103	CF, 10k ohm
RC07	24366473	CF, 47k ohm
RC08	24366103	CF, 10k ohm
RC09	24366682	CF, 6800 ohm
RC10	24366473	CF, 47k ohm
RC11	24366102	CF, 1k ohm
RC12	24366102	CF, 1k ohm
RF85	24556109	FR, 1 ohm, ±10%, 1/2W
RM03	24366182	CF, 1800 ohm
RM04	24366242	CF, 2400 ohm
RM05	24366471	CF, 470 ohm
RM06	24366471	CF, 470 ohm
RN08	24366103	CF, 10k ohm
RR01	24366102	CF, 1k ohm
RX02	24366103	CF, 10k ohm
RX03	24366472	CF, 4700 ohm
RX10	24366183	CF, 18k ohm
RX13	24366102	CF, 1k ohm
RX21	24366821	CF, 820 ohm
RY01	24366473	CF, 47k ohm
RY02	24366473	CF, 47k ohm
RY15	24366152	CF, 1500 ohm

COILS & TRANSFORMERS

L102	23262819	Coil, PIF, TRF1071D
L103	23237987	Coil, Peaking, TRF4100AC
L105	23237993	Coil, Peaking, TRF4339AC
L107	23237988	Coil, Peaking, TRF4829AC
L108	23237993	Coil, Peaking, TRF4339AC
L151	23262813	Coil, IF, TRF1077D
L152	23262813	Coil, IF, TRF1077D
L162	23238561	Coil, Peaking, TRF4R82AJ
L203	23237974	Coil, Peaking, TRF4121AC
L311	23103901	Coil (Ferrite Bead), TEM2017
L315	23289100	Coil, Peaking, TRF4100AF

Location No.	Part No.	Description
L410	23221722	Coil, Choke, TLN3142D
⚠ L462		DY, Supplied with V901
L501	23238934	Coil, Peaking, TRF4109AC
L503	23238922	Coil, Peaking, TRF4100AC
L551	23250972	Coil, 1H-Delay Matching, TRF5418D
L561	23237985	Coil, Peaking, TRF4150AC
L601	23237986	Coil, Peaking, TRF4120AC
L651	23232946	Coil, Variable, TRF3073D
L811	23237995	Coil, Peaking, TRF4229AC
L812	23221060	Coil, Choke, TLN1015E
⚠ L901	23200781	Coil, Degaussing, TSB-2229
LA01	23237999	Coil, Peaking, TRF4109AC
LA02	23237976	Coil, Peaking, TRF4820AC
LB01	23262730	Coil, IF, TRF1120
LM01	23262797	Coil, IF, TRF1093D
LM02	23272988	Coil, Chroma Demod, TRF5414
LM03	23272988	Coil, Chroma Demod, TRF5414
LM04	23262798	Coil, IF, TRF1092D
⚠ T401	23224983	Transformer, Horiz. Drive, TLN1039
⚠ T461	23236255	Transformer, Flyback, AT2079/23
⚠ T801	23211929	Line Filter, TRF3130
T802	23217078	Transformer, Converter, TPW3185

SEMICONDUCTORS

IC101	23318201	IC, T51496P
IC303	23119548	IC, AN5515
IC501	B0379475	IC, TA8659AN
IC660	23318487	IC, TDA7052
ICA01	23319011	IC, M34300-584SP
ICA02	23318482	IC, M6M80011AP
Q103	23114691	Transistor, BC557A
Q104	23114689	Transistor, BC547A
Q161	A6708871	Transistor, 2SC388ATM
Q202	23114691	Transistor, BC557A
Q203	23114689	Transistor, BC547A
Q204	A6041876	Transistor, 2SK117-GR FA-2
Q206	23114689	Transistor, BC547A
Q402	A6330069	Transistor, 2SC2482 FA-1
⚠ Q404	A6868673	Transistor, 2SD1426
Q505	A6330059	Transistor, 2SC2482
Q507	A6330059	Transistor, 2SC2482
Q509	A6330059	Transistor, 2SC2482
Q510	A6330059	Transistor, 2SC2482
Q602	23114689	Transistor, BC547A
Q603	23114689	Transistor, BC547A
Q604	23114689	Transistor, BC547A
Q661	A6342200	Transistor, 2SC2878-A
Q698	23114689	Transistor, BC547A
Q699	23114691	Transistor, BC557A
Q801	23114521	Transistor (STR), STR50020
Q802	23114632	Transistor, BC547B
Q803	A6361601	Transistor, 2SC3425 (LB)
QA03	23114632	Transistor, BC547B
QA04	23114546	Transistor, BC557B
QA05	23114689	Transistor, BC547A
QA06	23114689	Transistor, BC547A
QA07	23114689	Transistor, BC547A
QA09	23114691	Transistor, BC557A

Location No.	Part No.	Description
QA10	23114546	Transistor, BC557B
QA11	23114546	Transistor, BC557B
QA16	23114689	Transistor, BC547A
QB01	23114689	Transistor, BC547A
QB02	23114689	Transistor, BC547A
QC01	23114691	Transistor, BC557A
QC02	23114691	Transistor, BC557A
QC03	23114689	Transistor, BC547A
QC04	23114691	Transistor, BC557A
QC05	23114689	Transistor, BC547A
QY01	23114689	Transistor, BC547A
D241	A7150041	Diode, 1SS104
D242	23115599	Diode, 1N4148
D303	23118479	Diode, BYD33J
D309	23118479	Diode, BYD33J
D314	A7117205	Diode, Zener, 04AZ12X
D315	A7116715	Diode, Zener, 04AZ7.5Y
D401	A7116925	Diode, Zener, 04AZ9.1Z
D402	A7117715	Diode, Zener, 04AZ20Y
D403	A7117215	Diode, Zener, 04AZ12Y
D406	23118479	Diode, BYD33J
D408	23118479	Diode, BYD33J
D410	A7116815	Diode, Zener, 04AZ8.2Y
D591	A7275400	Diode, 1S2462
D592	A7275400	Diode, 1S2462
D593	A7275400	Diode, 1S2462
D594	23115599	Diode, 1N4148
D601	A7288601	Diode, 1S2186 FA-1
D602	A7288601	Diode, 1S2186 FA-1
D698	23115599	Diode, 1N4148
D699	23115599	Diode, 1N4148
D805	23118479	Diode, BYD33J
D806	23115530	Diode, RG2
D807	23118479	Diode, BYD33J
D808	23118339	Diode, Zener, R2M
D809	23118479	Diode, BYD33J
D810	23118124	Diode, LB-156 (LF-B)
DA01	23115599	Diode, 1N4148
DA02	23115599	Diode, 1N4148
DA03	23115599	Diode, 1N4148
DA04	23115599	Diode, 1N4148
DA06	23115599	Diode, 1N4148
DA07	23115599	Diode, 1N4148
DA08	23115599	Diode, 1N4148
DA11	23115599	Diode, 1N4148
DA15	23115599	Diode, 1N4148
DA16	23115599	Diode, 1N4148
DA17	23115599	Diode, 1N4148
DA20	23115599	Diode, 1N4148
DA21	23115599	Diode, 1N4148
DA22	23115599	Diode, 1N4148
DA30	23115878	Diode, Zener, μPC574J(L)
DA31	23115599	Diode, 1N4148
DA34	23115599	Diode, 1N4148
DA41	A7116225	Diode, Zener, 04AZ4.7Z
DA42	A7116225	Diode, Zener, 04AZ4.7Z
DA43	A7116325	Diode, Zener, 04AZ5.1Z
DC01	23115599	Diode, 1N4148
DC02	23115599	Diode, 1N4148
DC03	23115599	Diode, 1N4148
DE40	23118969	Diode (LED), MV57124, Red
DE41	23318436	Diode (LED), MV53124A, Yellow
DF83	23118479	Diode, BYD33J

Location No.	Part No.	Description
MISCELLANEOUS		
⚠ F801	23144896	Fuse, 2.0A
F801A	23165102	Fuse Holder
⚠ F803	23144876	Fuse, 0.5A
F803A	23165102	Fuse Holder
K901	23120303	Remote Sensor, IR-9109-K
P001	23142531	Aerial Terminal, AT937
P801	23176772	Power Cord
S202	23145682	Switch, Lever, 1C3P
S801	23145434	Switch, Power, 2C2P
SA01	23145430	Switch, Push, 1C1P
SA02	23145430	Switch, Push, 1C1P
SA03	23145430	Switch, Push, 1C1P
SA04	23145430	Switch, Push, 1C1P
V901A	23902022	Socket, CRT, 8P
W201	23250937	Coil, Delay Line, TRF2054
W661	23151295	Speaker, SPK1188, 77x77mm, 16 ohm
X401	23153721	Ceramic Resonator, 503kHz, TCR1023
X501	23153979	Crystal, 4.43MHz
X502	23250950	Coil, 1H-Delay Line, DL711
Z101	A5611320	PIF SAW Filter, F1057
Z102	23107915	Ceramic Video Trap, 5.5 to 5.7MHz, TCF1017
Z103	23107913	Ceramic Video Trap, 6.5MHz, TCF1018
Z602	23107949	Ceramic Filter, 6.5MHz, SFE6.5MBF
Z603	23107947	Ceramic Filter, 5.5MHz, SFE5.5MBF
ZA01	23153741	Ceramic Resonator, TCR1029
PC BOARD ASSEMBLIES		
U902A	23337044	Main Board, PB0814-1
U902B	23337045	CRT Drive Board, PB0814-2
PICTURE TUBE		
⚠ V901	23112413	Picture Tube, A34EAC00X01
TUNER		
H001	23121567	Tuner, VHF/UHF, EG447
REMOTE HAND SET PARTS		
K902	23120358	Remote Hand Unit, CT-9476
AT01	23304489	Upper Case
AT02	23300919	Lower Case
AT03	23300920	Battery Cover
AT04	23300921	Filter
ST01	23304490	Rubber Sheet
UT01	23336217	PC Board, PW9933
ZT01	23153736	Ceramic Resonator, CSB455EB20

Location No.	Part No.	Description

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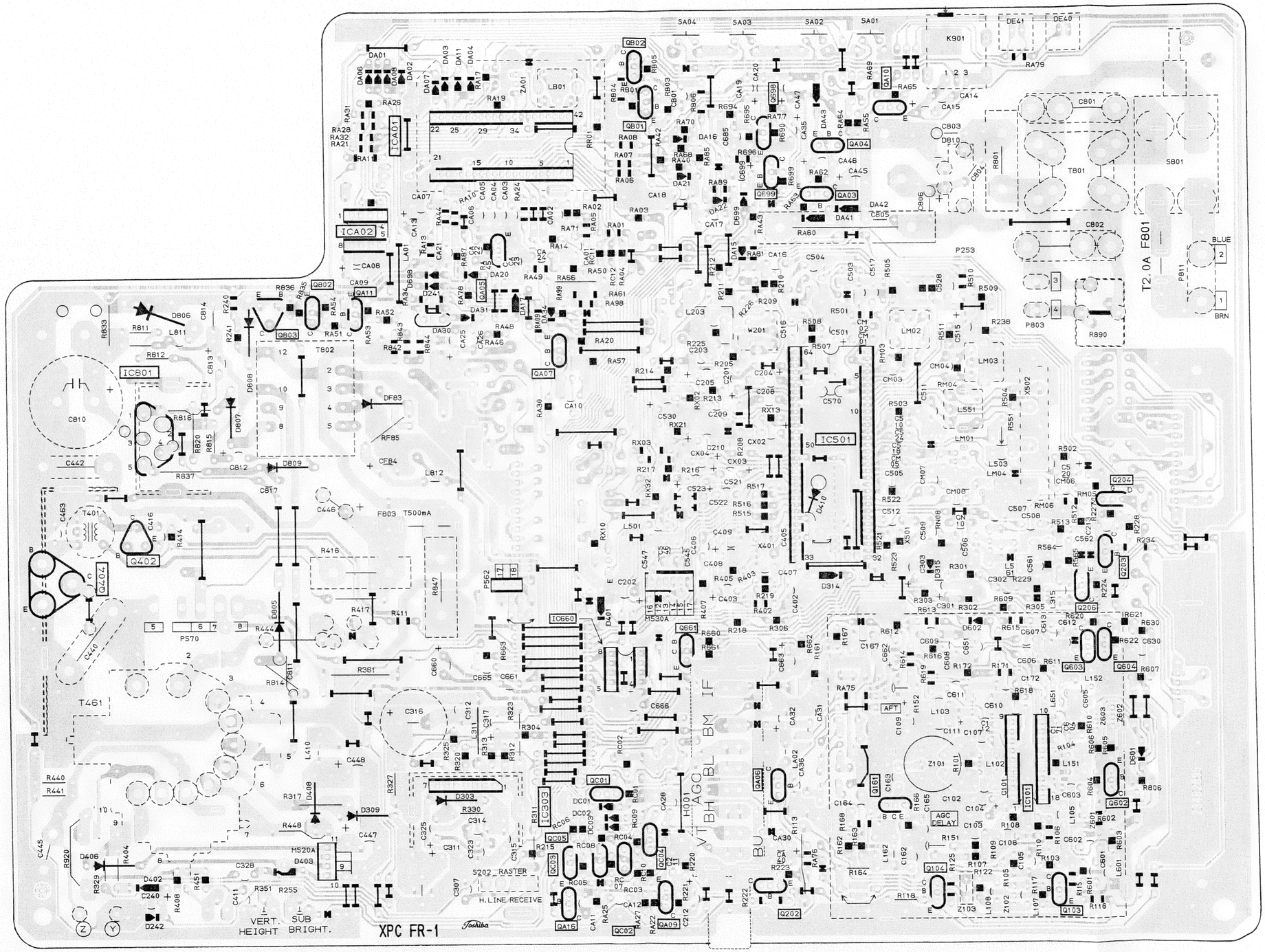
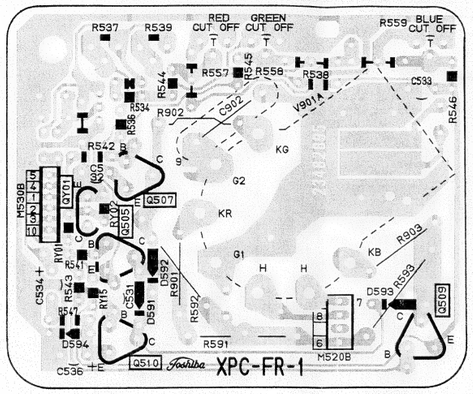
MAIN BOARD PB0814-1

BOTTOM (FOIL) SIDE



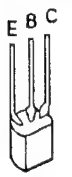
CRT DRIVE BOARD PB0814-2

BOTTOM (FOIL) SIDE



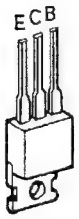
TERMINAL VIEW OF TRANSISTORS

① BC327
BC337
BC547A
BC547B
BC547C
BC557A
BC557B
BC556A

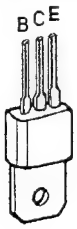


② 2SK30ATM
2SK117

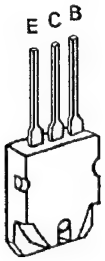
③ BD202



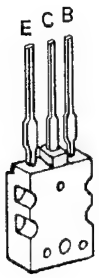
④ BF871
2SD553
2SC1569



⑤ 2SC3678
2SC3182N

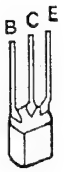


⑥ 2SD1427
2SD1432

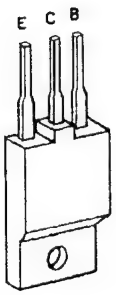


⑦ 2SC2482
2SA1321
2SC2230
2SA1020
2SC2655
2SC752GTM

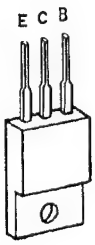
⑧ 2SC388ATM
2SA1015
2SC1959
2SA562TM



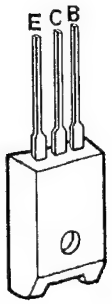
⑨ 2SD1548



⑩ 2SC2023



⑪ ON4409



1400RST

SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE

Component marked with the International Hazard Symbol must, if changed, be replaced by an approved type and must be mounted as the original. This will ensure that the safety standards adhered to during manufacture will be maintained following any servicing procedure.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltage readings were obtained using a high impedance digital voltmeter.
2. (—) or ground lead of instruments should be connected to the ground marked (⊥) in the shematic on checking Non-isolated circuit surrounded by mark but should be connected to the points marked (⏚) on checking isolated circuit.
3. The voltage readings may vary as much as ±20%.
4. Check that the Tuning, A.F.C., Brightness, Contrast and Colour controls are adjusted for the best picture, making sure that the Contrast,Brightness and Colour controls are set near to their mid-positions.
5. The waveforms were taken using a standard colour bar signal and were observed using a wide band oscilloscope via a low capacity probe.

NOTES:

1. This circuit diagram is subject to change without notice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

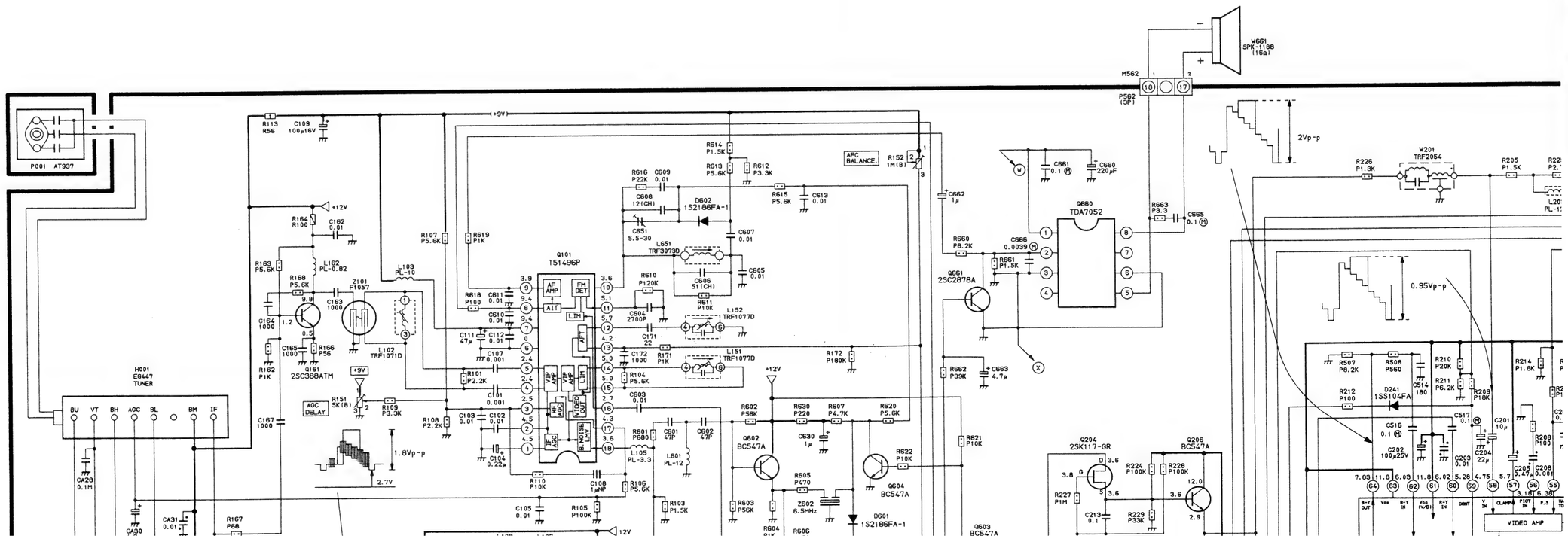
GROUNDING SYMBOL

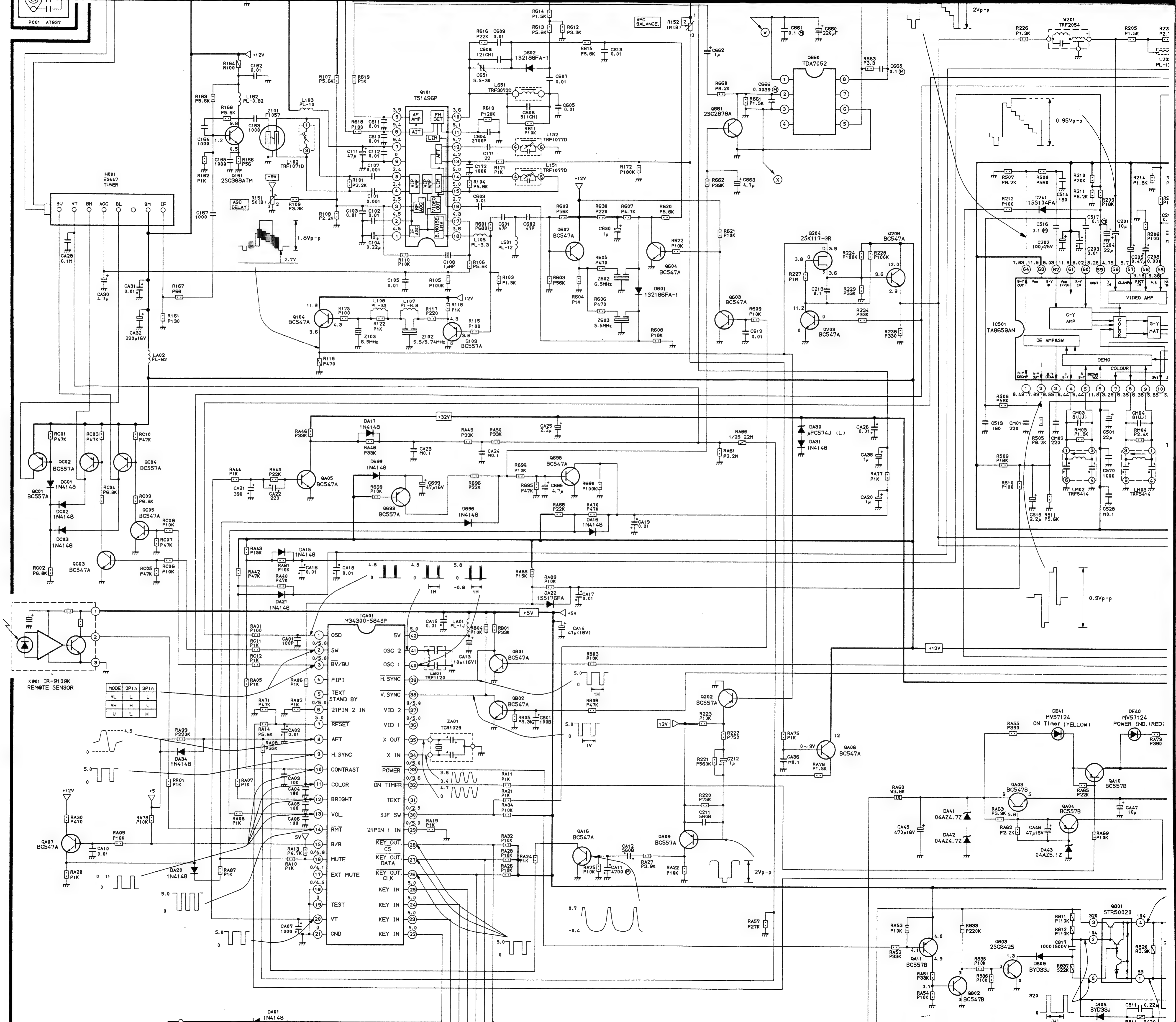
1. ⊥: Non isolated ground, ⏚ : Isolated ground.

RESIS

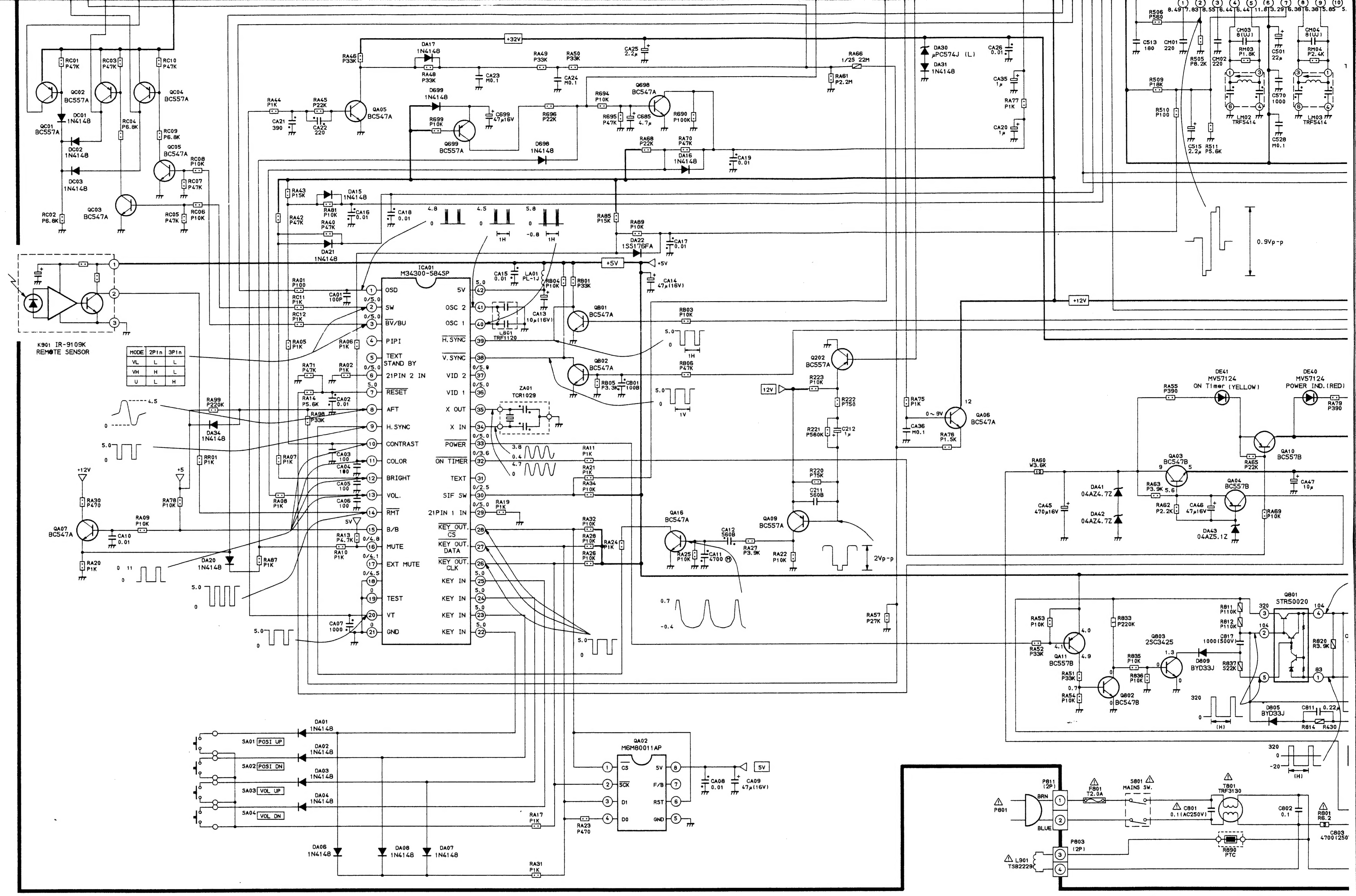
Prefixed

C
Ox
In
Cem





P001 AT937
H001
EG447
TUNER
BU VT BH AGC BL BM IF
Q151
2SC388ATM
Z101
F1057
Q101
TS1496P
AF AMP
FM DET
AGC DELAY
1.8Vp-p
2.7V
Q104
BC547A
Q103
BC557A
Z102
5.5/5.74MHz
Z103
6.5MHz
AFC BALANCE
Q660
TDA7052
Q661
2SC2878A
Q602
BC547A
Q604
BC547A
Q603
BC547A
Z602
6.5MHz
Z603
5.5MHz
D601
1S2186FA-1
D602
1S2186FA-1
L651
TRF3073D
L152
TRF1077D
L151
TRF1077D
Q204
2SK117-GR
Q206
BC547A
Q203
BC547A
W201
TRF2054
2Vp-p
0.95Vp-p
0.9Vp-p
IC501
TA8659AN
VIDEO AMP
C-Y AMP
DE AMP&SW
DEMO
COLOUR
LM02
TRF5414
LM03
TRF5414
QC01
BC557A
QC02
BC557A
QC04
BC547A
QC05
BC547A
QC03
BC547A
DC01
1N4148
DC02
1N4148
DC03
1N4148
+32V
DA17
1N4148
DA30
μPC574J (L)
DA31
1N4148
QA05
BC547A
Q699
BC557A
Q698
BC547A
D699
1N4148
D698
1N4148
DA16
1N4148
DA15
1N4148
DA21
1N4148
DA22
1SS176FA
+5V
+12V
K901 IR-9109K
REMOTE SENSOR
MODE 2Pin 3Pin
VL L L
VH H L
U H H
ICA01
M34300-584SP
OSD
SW
BV/BU
PIPI
TEXT STAND BY
21PIN 2 IN
RESET
AFT
H.SYNC
CONTRAST
COLOR
BRIGHT
VOL.
RMT
B/B
MUTE
EXT MUTE
TEST
VT
GND
5V
OSC 2
OSC 1
H.SYNC
V.SYNC
VID 2
VID 1
X OUT
X IN
POWER
ON TIMER
TEXT
SIF SW
21PIN 1 IN
KEY OUT. CS
KEY OUT. DATA
KEY OUT. CLK
KEY IN
ZA01
TCR1029
QB01
BC547A
QB02
BC547A
Q202
BC557A
QA06
BC547A
QA07
BC547A
DA34
1N4148
DA20
1N4148
QA16
BC547A
QA09
BC557A
DE41
MV57124
ON Timer (YELLOW)
DE40
MV57124
POWER IND.(RED)
QA03
BC547B
QA04
BC557B
QA10
BC557B
DA41
04AZ4.7Z
DA42
04AZ4.7Z
DA43
04AZ5.1Z
Q801
STR50020
Q803
2SC3425
D809
BYD33J
D805
BYD33J
QA11
BC557B
Q802
BC547B
DA01
1N4148



ICA01
M34300-584SP
OSD
SW
BV/BU
PIPI
TEXT STAND BY
21PIN 2 IN
RESET
AFT
H. SYNC
CONTRAST
COLOR
BRIGHT
VOL.
RMT
B/B
MUTE
EXT MUTE
TEST
VT
GND
5V
OSC 2
OSC 1
H. SYNC
V. SYNC
VID 2
VID 1
X OUT
X IN
POWER
ON TIMER
TEXT
SIF SW
21PIN 1 IN
KEY OUT. CS
KEY OUT. DATA
KEY OUT. CLK
KEY IN
K901 IR-9109K
REMOTE SENSOR
MODE
2Pin
3Pin
VL
VH
U
QA02
M6M80011AP
SA01 POSI UP
SA02 POSI DN
SA03 VOL UP
SA04 VOL DN
ZA01
TCR1029
+32V
+5V
+12V
DE41
MV57124
ON Timer (YELLOW)
DE40
MV57124
POWER IND. (RED)
Q801
STR50020
S801
MAINS SW.
T801
TRF3130
F801
T2.0A
P801
P803
L901
TS82229
BRN
BLUE
R890
PTC
0.9Vp-p
2Vp-p

are expressed in

are expressed in

RESISTORS

Prefixed to values:

TYPE	MARK
Carbon Comp.	S
Oxide Metal Film	R
Ins. Carbon Film	P
Wire Wound	W
Cement covered W.W.	NO MARK
Fusible Res.	FR

Suffixes to values:

TOLERANCE	MARK
±1%	(F)
±2%	(G)

Suffixes to VR values:

LAW	MARK
Linear	(B)
'C' Curve Characteristic	(C)

Rating Markings:

WATTAGE	MARK
1/6W	●●
1/4W	●
	⊠
1/2W	⊘
1W	1
2W	2

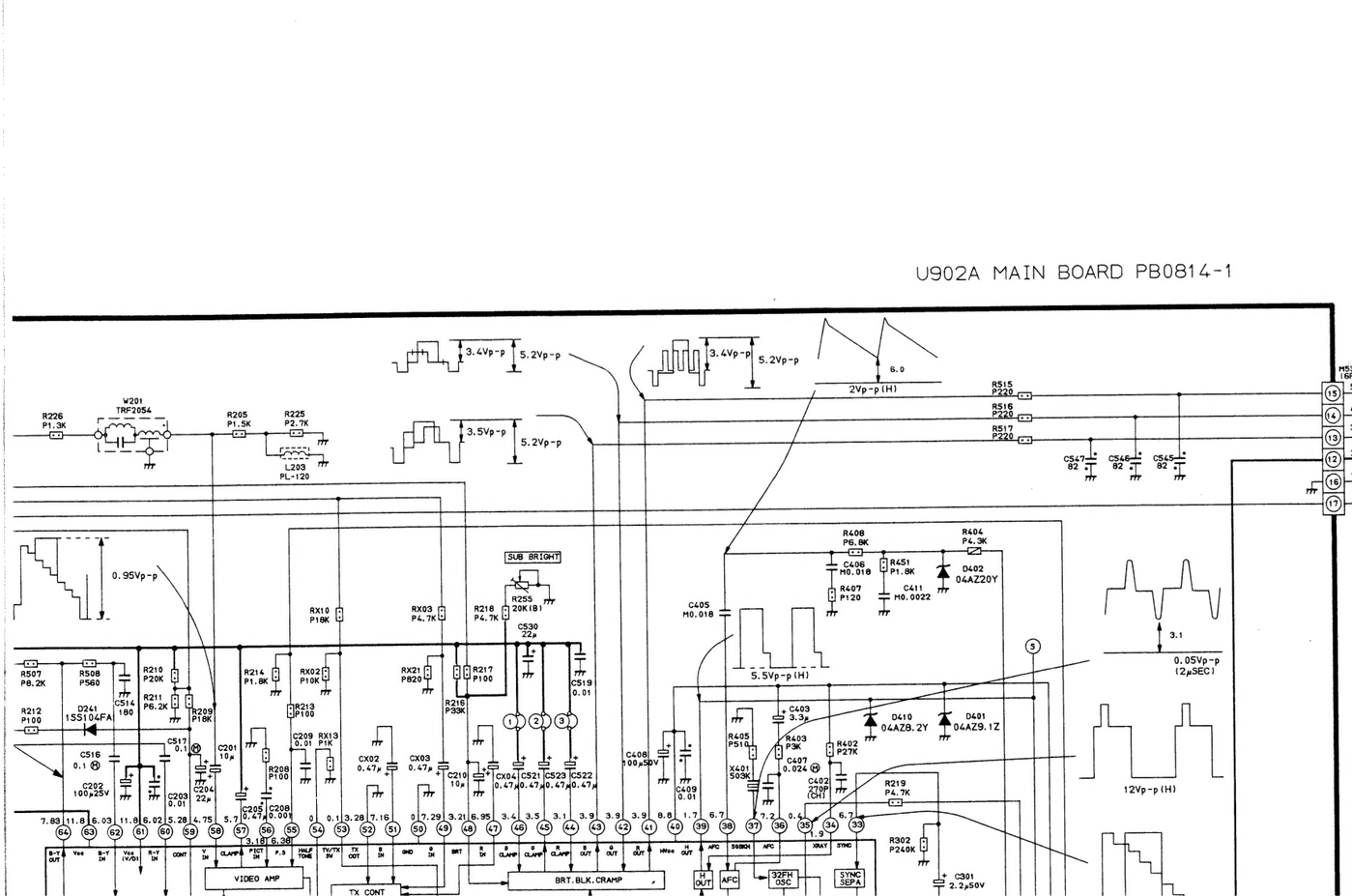
WATTAGE	MARK
3W	3
5W	5
10W	10
15W	15
20W	20
25W	25

CAPACITORS

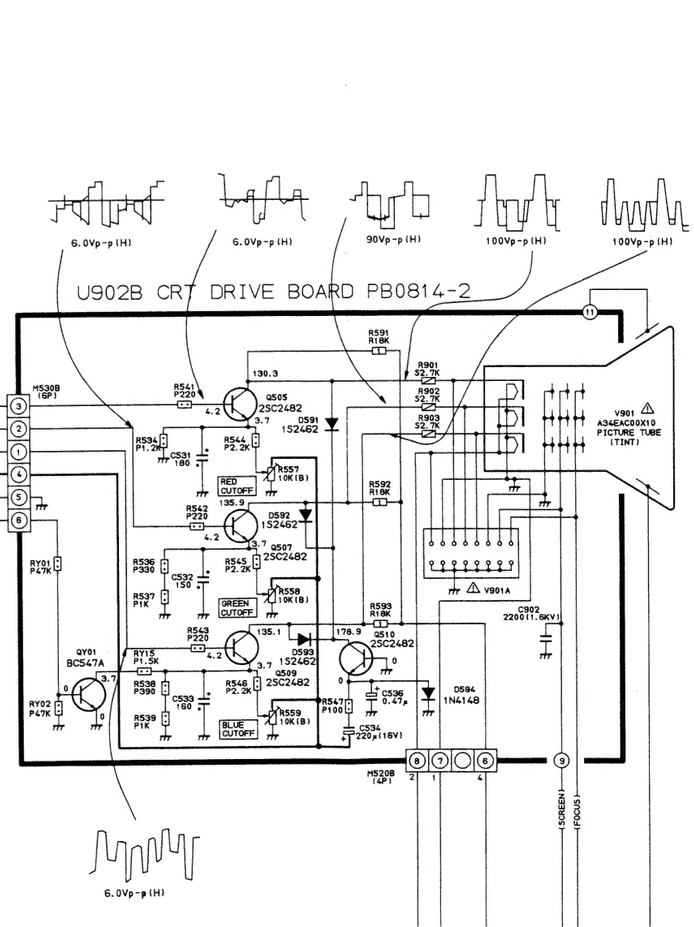
Rating Markings:

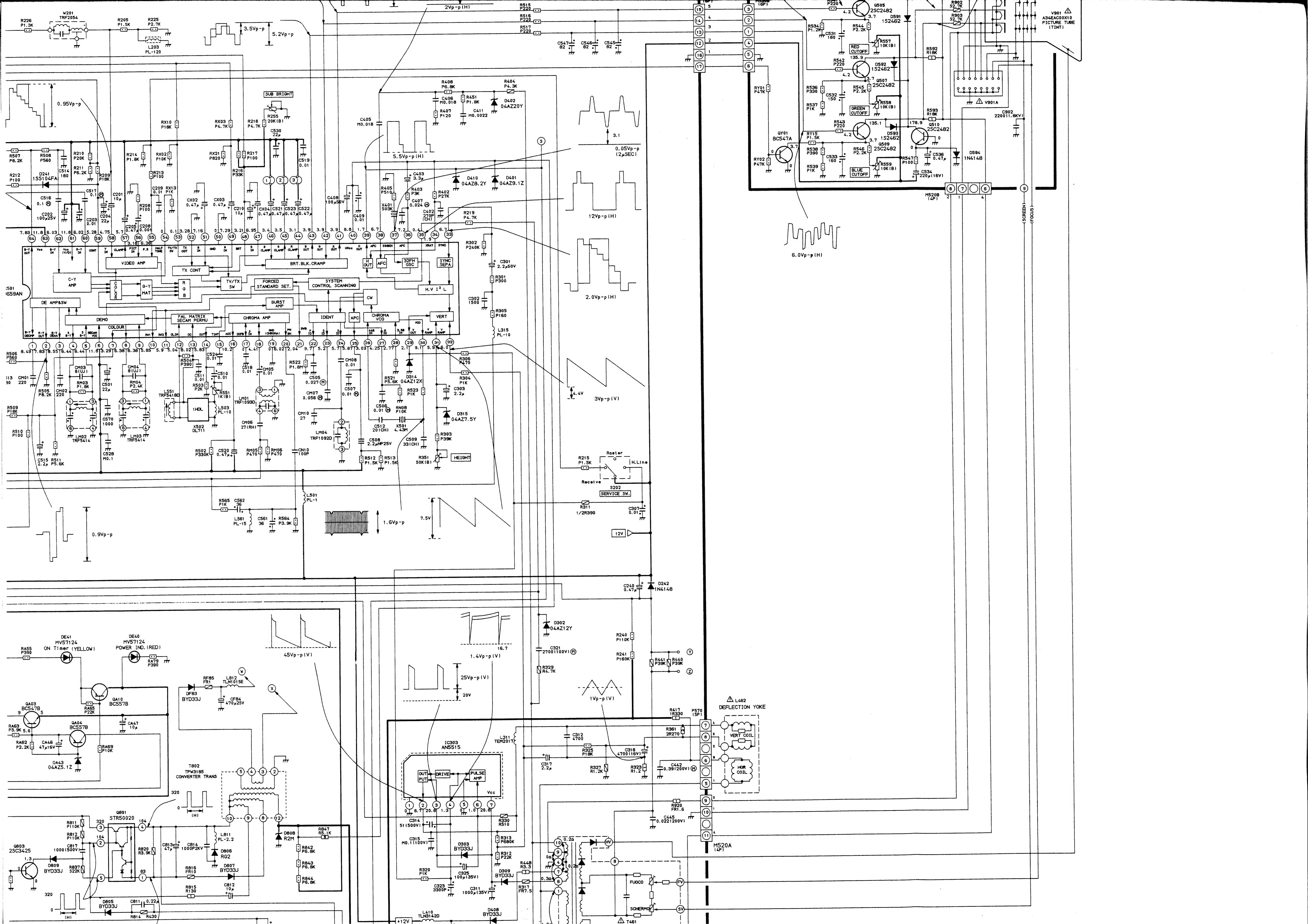
Type	Mark
Ceramic Disc 50V Only	⊣⊢
Electrolytic	⊣⊢
Electrolytic Non-Polar	⊣⊢
Variable Capacitor	⊣⊢
Other	⊣⊢

U902A MAIN BOARD PB0814-1

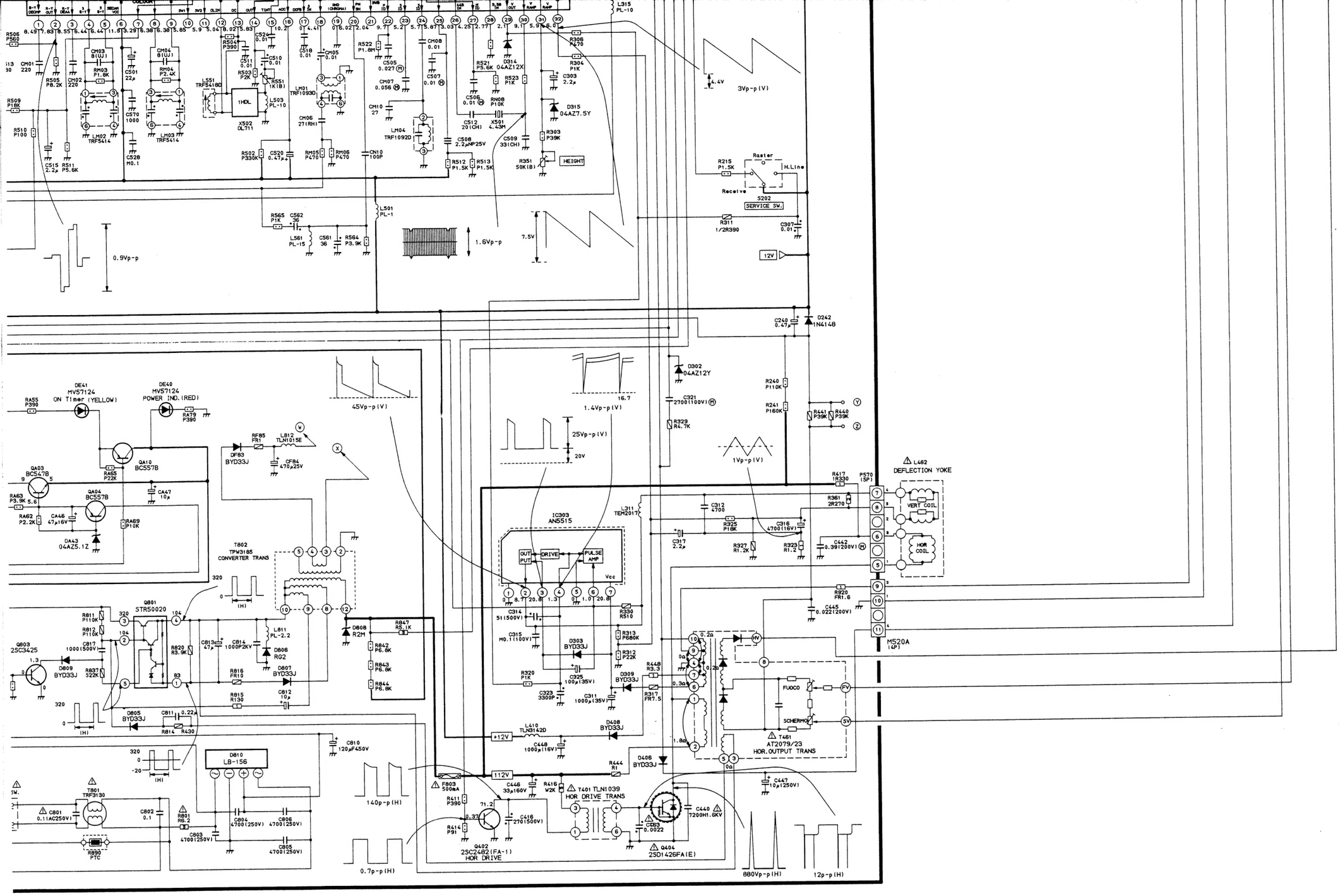


U902B CRT DRIVE BOARD PB0814-2





W201 TRF2054
L203 PL-120
VIDEO AMP
TX CONT
TV/TX SW
BRT.BLK.CRAMP
FORCED STANDARD SET.
SYSTEM CONTROL SCANNING
C-Y AMP
G-Y MAT
DE AMP&SW
DEMO
COLOUR
PAL MATRIX SECAM PERMU
CHROMA AMP
BURST AMP
IDENT
APC
CHROMA VCO
VERT
H.V I² L
CW
H OUT
AFC
32FH OSC
SYNC SEPA
SUB BRIGHT
HEIGHT
1HDL
X502 DL711
5.5Vp-p(H)
12Vp-p(H)
2.0Vp-p(H)
3Vp-p(V)
0.05Vp-p (2μSEC)
0.95Vp-p
0.9Vp-p
1.6Vp-p
6.0Vp-p(H)
2Vp-p(H)
3.5Vp-p
5.2Vp-p
Raster
H.Line
Receive
S202 SERVICE SW.
12V
45Vp-p(V)
1.4Vp-p(V)
25Vp-p(V)
1Vp-p(V)
DE41 MV57124 ON Timer (YELLOW)
DE40 MV57124 POWER IND.(RED)
QA03 BC547B
QA10 BC557B
QA04 BC557B
DA43 04AZ5.1Z
T802 TPW3185 CONVERTER TRANS
Q801 STR50020
Q803 2SC3425
IC303 AN5515
OUT PUT
DRIVE
PULSE AMP
Vcc
L311 TEM2017
L410 TLN3142D
D302 04AZ12Y
D242 1N4148
L462 DEFLECTION YOKE
VERT COIL
HOR COIL
P570 (5P)
M520A (4P)
M520B (4P)
FUOCO
SCHERMO
T461
V901 A34EAC00X10 PICTURE TUBE (TINT)
V901A
Q505 2SC2482
Q507 2SC2482
Q509 2SC2482
Q510 2SC2482
D591 1S2462
D592 1S2462
D593 1S2462
D594 1N4148
QY01 BC547A
RED CUTOFF
GREEN CUTOFF
BLUE CUTOFF
C902 2200(1.6KV)
(SCREEN)
(FOCUS)


R506 P560
CM01 220
R505 P8.2K
CM02 220
CM03 8(UJ)
RM03 P1.6K
LM02 TRF5414
CM04 8(UJ)
RM04 P2.4K
LM03 TRF5414
C501 22μ
C570 1000
C528 M0.1
R509 P16K
R510 P100
C515 2.2μ
R511 P5.6K
L551 TRF5418C
1HDL
L503 PL-10
X502 0L711
R504 P390
R503 P2K
C524 0.01
C511 0.01
C510 0.01
R551 1K(B)
LM01 TRF1093D
CM06 27(RH)
C528 M0.1
R502 P330K
C520 0.47μ
RM05 P470
RM06 P470
CM05 0.01
CM10 100P
C518 0.01
R522 P1.8M
C505 0.027(M)
CM07 0.056(M)
CM08 0.01
C507 0.01(M)
CM10 27
LM04 TRF1092D
C508 2.2μNP25V
R512 P1.5K
R513 P1.5K
C512 201(CH)
X501 4.43M
C509 331(CH)
R521 P5.6K
D314 04AZ12X
R523 P1K
C506 0.01(K)
RM08 P10K
R306 P270
R304 P1K
C303 2.2μ
D315 04AZ7.5V
R303 P39K
R351 50K(B)
HEIGHT
L315 PL-10
4.4V
3Vp-p(V)
R215 P1.5K
Raster
H.Line
Receive
S202
SERVICE SW.
R311 1/2R390
C307 0.01
12V
L501 PL-1
R565 P1K
C562 36
L561 PL-15
C561 36
R564 P3.9K
0.9Vp-p
1.6Vp-p
7.5V
C249 0.47μ
D242 1N4148
D302 04AZ12Y
C321 2700(100V)(M)
R329 R4.7K
R240 P110K
R241 P160K
R441 P39K
R440 P39K
16.7
1.4Vp-p(V)
25Vp-p(V)
20V
1Vp-p(V)
45Vp-p(V)
DE41 MV57124 ON Timer (YELLOW)
DE40 MV57124 POWER IND.(RED)
RA55 P390
RA79 P390
QA03 BC547B
QA10 BC557B
RA65 P22K
RA63 P3.9K 5.6
QA04 BC557B
CA47 10μ
RA62 P2.2K
CA46 47μ16V
RA69 P10K
DA43 04AZ5.1Z
RF85 FR1
L817 TLN1015E
DF83 BYD33J
CF84 470μ25V
T802 TPW3185 CONVERTER TRANS
320
0
(H)
Q801 STR50020
R811 P110K
R812 P110K
C817 1000(500V)
R820 R3.9K
C813 47μ
C814 1000P2KV
L811 PL-2.2
D806 RG2
D807 BYD33J
R816 FR10
R815 R130
C812 10μ
D805 BYD33J
C811 0.22
R814 R430
Q803 2SC3425
D809 BYD33J
R837 S22K
B3
D808 R2M
R847 R5.1K
R842 P5.6K
R843 P5.6K
R844 P5.6K
C810 120μF450V
D810 LB-156
T801 TRF3130
C801 0.11AC250V
C802 0.1
R801 R6.2
C804 4700(250V)
C806 4700(250V)
C803 4700(250V)
C805 4700(250V)
R890 PTC
140p-p(H)
0.7p-p(H)
IC309 AN5515
OUTPUT
DRIVE
PULSE AMP
Vcc
C314 51(500V)
C315 M0.1(100V)
R330 R510
R313 P680K
R312 P22K
D303 BYD33J
R320 P1K
C325 100μ(35V)
C323 3300P
C311 1000μ(35V)
D309 BYD33J
R448 R3.3
R317 FR7.5
L410 TLN3142D
+12V
C449 1000μ(16V)
D408 BYD33J
D406 BYD33J
R444 R1
+12V
F803 500mA
C446 33μ160V
R416 W2K
T401 TLN1039 HOR DRIVE TRANS
R411 P390
R414 P91
C416 2761(500V)
Q402 2SC2482(FA-1) HOR DRIVE
C403 0.022
C440 7200H1.6KV
Q404 2SD1426FA(E)
C447 10μ(250V)
880Vp-p(H)
12p-p(H)
L311 TEH2017
C312 4700
R325 P18K
C316 4700(16V)
C317 2.2μ
R327 R1.2K
R323 R1.2
C442 0.39(200V)(M)
R417 1R330
P570 (SP)
L462 DEFLECTION YOKE
VERT COIL
HOR COIL
R361 2R270
R320 FR1.6
C445 0.022(200V)
M520A (4P)
0.2a
0.2b
0.3a
1.8a
FUOCO
SCHERMO
T461 AT2079/23 HOR.OUTPUT TRANS
FV
SV